Claims

1. Integrated circuit comprising at least a digital part (1) comprising a large number of elementary transistors connected to one another so as to form a plurality of functional elements (10), the functional elements being grouped in subassemblies (2) each comprising a first electrical supply terminal (B1) and a second electrical supply terminal (B2) and a clock input (H), the subassemblies (2) being connected in series by means of their supply terminals (B1 and B2) to the terminals of a voltage supply source (3), integrated circuit (1) characterized in that the clock input (H) of each subassembly (2) is connected to a common clock circuit (5) and that the clock input (H) of at least one subassembly (2) is connected to the common clock circuit (5) by means of a device (6,7) for shifting the levels of the clock signal.

2. Integrated circuit (1) according to claim 1, characterized in that the subassemblies (2) are formed in such a way that the sum of the instantaneous supply currents flowing through the functional elements (10) of a subassembly is close to that of the other subassemblies.

3. Integrated circuit (1) according to one of the claims 1 and 2, characterized in that the clock inputs (H) of at least two adjacent subassemblies (2) are connected by a device (6) for shifting the clock signal levels.

4. Integrated circuit (1) according to claim 3, characterized in that the clock input of one of the end subassemblies (2e) is connected by means of an additional device (6e) for shifting the clock signal levels at the output of the clock circuit (5).

5. Integrated circuit (1) according to any one of the claims 1 to 4, characterized in that the device (6,7) for shifting the clock signal levels comprises at least one capacitor.

6. Integrated circuit (1) according to any one of the claims 1 to 5, characterized in that the device (6,7) for shifting the clock signal levels comprises at least one transistor.

7. Integrated circuit according to any one of the claims 1 to 6, characterized in that all the subassemblies (2) are identical.

8. Integrated circuit according to any one of the claims 1 to 7, characterized in that each of the subassemblies (2) comprises a voltage limiting circuit (9) connected between its power supply terminals (B1 and B2).

9. Integrated circuit according to claim 8, characterized in that the voltage limiting circuit (9) comprises a diode.

10. Integrated circuit according to one of the claims 8 and 9, characterized in that the voltage limiting circuit (9) comprises a transistor.

11. Integrated circuit according to any one of the claims 1 to 10, characterized in that each subassembly (2) comprises a decoupling capacitor (8) connected between the first power supply terminal (B1) and the second power supply terminal (B2) of the subassembly.

12. Integrated circuit according to any one of the claims 1 to 11, characterized in that the integrated circuit comprises means for electrical insulation between the subassemblies.

13. Integrated circuit according to claim 12, characterized in that the means for electrical insulation between the different subassemblies are reverse biased diode junctions.

14. Integrated circuit according to one of the claims 12 and 13, characterized in that the means for electrical insulation between the different subassemblies are dielectric zones.

15. Integrated circuit according to any one of the claims 1 to 14, characterized in that the integrated circuit comprises silicon blocks achieved from a silicon-on-insulator substrate.